- 4 -

a central processing unit (CPU) connected to the LAN hub and operable to process and encapsulate the LAN data received into wide-area network (WAN) frames; and

an overhead interface connected to the CPU and operable to forward the WAN frames to the optical transmitter for transmission in the one or more reallocated bytes.

35.(Amended) The apparatus of claim 34 wherein the LAN interface is connected to a LAN device to receive the LAN data.

REMARKS

Applicant notes that in the Office Action Summary issued in connection with the Detailed Action of March 14, 2003, the Detailed Action was noted as being final and non-final. This was communicated' to the Examiner on April 1, 2003, and a new Office Action Summary was issued and faxed to Applicant on April 1, 2003 indicating that the Detailed Action is non-final.

35 U.S.C. 112 Rejections

In paragraph 2 under the "Claim Rejections – 35 U.S.C. 112 " heading, the Examiner has rejected claims 4 to 6 under 35 U.S.C. 112, second paragraph, as being indefinite stating that it is "unclear from claims 4-6 what the order of operation is".

With regard to claim 4, this claim depends on claim 3 which is directed to a method "for transmitting LAN data between a first and second network element (NE) in the optical transmission network via an optical link interconnecting the first and second NE". In claim 4, "a LAN device is connected to the first NE and…before transmitting frames with LAN data…, the method further comprises at the LAN device: generating the LAN data; and transmitting the LAN data generated to the first NE" (emphasis added on the underlined portion). Applicant submits that the additional steps recited by claim 4 are clearly recited as being performed "before transmitting frames with LAN data" and that there is no confusion as to the order of operation in regards to the additional steps of claim 4. Furthermore, Applicant submits that the order of operation of the additional individual steps of claim 4 is also made clear as the step of

- 5 -

"transmitting the LAN data generated to the first NE" makes it clear that the LAN data being transmitted is "LAN data generated". The Examiner is respectfully requested to withdraw his 35 U.S.C. 112 rejection of claim 4.

Claim 5 depends on claim 4 and Applicant submits that in claim 5 it is made clear that the additional steps of this claims are performed "before transmitting frames within LAN data". Furthermore, claim 5 recites the additional steps of:

"receiving the LAN data transmitted from the LAN device; and

buffering the LAN data received for adapting the rate at which the LAN data is received at the first NE to the rate at which the LAN data received is transmitted to the second NE".

With respect, although the order of operation of these two steps has not been specifically recited, Applicant notes that one of skill in the art would realize that the LAN data transmitted from the LAN device must be received before it can be buffered and therefore Applicant maintains that claim 5 is clear. The Examiner is respectfully requested to withdraw his 35 U.S.C. 112 rejection of claim 5.

With regard to claims 6, this claim depends on claim 5 and the additional method steps of claim 6 are clearly recited as being performed "after transmitting frames with LAN data". Furthermore, although the order of operation of the additional method steps of claim 6 have not been explicitly recited, Applicant submits that one of skill in the art would realize the order of operation required to make the invention work and Applicant submits that an explicit order of operation is unnecessary.

Establishment of Common Ownership

The United States Patent No. 6,222,848 B1 (Hayward et al.) cited by the Examiner and the present application were, at the time the invention was made, owned by, or subject to an obligation of assignment to Nortel Networks Corporation which has since then undergone a change of name to Nortel Networks Limited. In view of this, Applicant would like to note that

- 6 -

Hayward et al. (U.S. patent No. 6,222,848 B1) is not citable under 35 U.S.C. 103 in view of 35 U.S.C. 103(c).

35 U.S.C. 103 Rejections

The Examiner has rejected claims 1 to 8, 12 to 16, 18 to 22, 24, 28 to 39 and 41 to 48 under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,222,848 B1 (Hayward *et al.*) in view of United States Patent No. 5,828,670 (Narasimha *et al*). In view of 35 U.S.C. 103(c), since the invention of Hayward et al. and the present invention were commonly owned by, or subject to an obligation of assignment to Nortel Networks Corporation (now Nortel Networks Limited), Applicant submits that Hayward et al. cannot be cited under 35 U.S.C. 103(a) against claims 1 to 8, 12 to 16, 18 to 22, 24, 28 to 39 and 41 to 48. The Examiner is respectfully requested to withdraw his 35 U.S.C. rejection of claims 1 to 8, 12 to 16, 18 to 22, 24, 28 to 39 and 41 to 48.

In addition, in paragraph 2 under the Claim Rejection - 35 U.S.C. 103 heading, the Examiner has not formally rejected claim 40; however, the Examiner has addressed claim 40 in discussing patentability over the cited references. Claim 40 should be allowed for the same reasons as discussed above with reference to claims 1 to 8, 12 to 16, 18 to 22, 24, 28 to 39 and 41 to 48.

The Examiner has also rejected claims 9, 10, 17, 23, 25 and 26 under 35 U.S.C. 103(a) citing Hayward *et al.* in view of Narasimha *et al.* as applied to claims 1 to 8, 12 to 16, 18 to 22, 24, 28 to 39 and 41 to 48, and further in view of United States Patent No. 6,195,346 (Pierson, Jr). Again, in view of 35 U.S.C. 103(c), since the invention of Hayward et al. and the present invention were commonly owned by, or subject to an obligation of assignment to Nortel Networks Corporation (now Nortel Networks Limited), Applicant submits that Hayward et al. cannot be cited under 35 U.S.C. 103(a) against claims 9, 10, 17, 23, 25 and 26. The Examiner is respectfully requested to withdraw his 35 U.S.C. 103(a) rejection of claims 9, 10, 17, 23, 25 and 26.

- 7 -

Claims 1, 2 and 4 to 6 have been amended to replace the expression "one of more allocated bytes" with "one or more allocated bytes". Applicant submits that the amendments to claims 1, 2 and 4 to 6 have been made to correct for a typographical error only and not for purposes of patentability over the cited references.

Claims 32 to 35 has also been amended to change their claim dependencies. Applicant submits that the amendments to claims 32 to 35 have been made to correct for an error in claim dependency and not for purposes of patentability over the cited references.

With reference to paragraph 4 of the Detailed Action, Applicant appreciates the Examiner's comment that claims 11 and 27 would be allowable if re-written in independent form; however, in view of the above discussion Applicant elects not to re-write these claims in independent form at this stage.
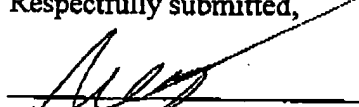
Finally, the specification has been amended on page 6, line 1, to correct for a typographical error.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made".

The Examiner is respectfully requested to pass this application to allowance but, if there are any outstanding issues, the Examiner is respectfully requested to telephone the undersigned.

Respectfully submitted,

By _____
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RAB:MPP:acb

1

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification

The paragraph beginning at page 5, line 26 and ending on page 6, line 2 has been amended as follows:

According to a broad aspect, the invention provides a method of transmitting LAN data in an optical transmission network wherein information is transmitted in frames, each frame containing a first plurality of bytes for transmitting payload data and a second plurality of bytes for transmitting overhead data, the method comprising allocating in each frame one or more bytes of the second plurality of bytes for LAN data transmissions, for each LAN data transmission, transmitting frames with LAN data in the one [of] or more allocated bytes until the LAN data transmission is complete.

In the Claims

Claims 1, 2, 4 to 6 and 32 to 35 have been amended as follows:

1.(Amended) A method of transmitting local area network (LAN) data in an optical transmission network wherein information is transmitted in frames, each frame containing a first plurality of bytes for transmitting payload data and a second plurality of bytes for transmitting overhead data, the method comprising:

allocating in each frame one or more bytes of the second plurality of bytes for LAN data transmissions;

for each LAN data transmission, transmitting frames with LAN data in the one [of] or more allocated bytes until the LAN data transmission is complete.

2.(Amended) The method of claim 1 wherein transmitting frames with LAN data in the one [of] or more allocated bytes until the LAN data transmission is complete comprises:

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- 2 -

encapsulating LAN data in wide-area network (WAN) frames; and

transmitting frames with the encapsulated LAN data in the one [of] or more allocated bytes until the LAN data transmission is complete.

4.(Amended)　The method of claim 3 wherein a LAN device is connected to the first NE and wherein before transmitting frames with LAN data in the one [of] or more allocated bytes until the LAN data transmission is complete, the method further comprises at the LAN device:

generating the LAN data; and

transmitting the LAN data generated to the first NE.

5.(Amended)　The method of claim 4 wherein before transmitting frames with LAN data in the one [of] or more allocated bytes until the LAN data transmission is complete, the method further comprises at the first NE:

receiving the LAN data transmitted from the LAN device; and

buffering the LAN data received for adapting the rate at which the LAN data is received at the first NE to the rate at which the LAN data received is transmitted to the second NE.

6.(Amended)　The method of claim 5 wherein after transmitting frames with LAN data in the one [of] or more allocated bytes until the LAN data transmission is complete, the method further comprises at the second NE:

receiving the frames transmitted;

extracting the LAN data from each frame received; and

transmitting the LAN data extracted to another LAN device connected to the second NE.

32.(Amended) The apparatus of claim [27] 31 wherein the reallocated portion of the overhead transmission capacity consists of an optical channel.

33.(Amended) The apparatus of claim [27] 31 wherein between the first and second NEs, payload and overhead data is transmitted in frames, each frame containing a first plurality of bytes for transmitting payload data and a second plurality of bytes for transmitting overhead data and wherein the reallocated portion of the overhead transmission capacity consists of one or more bytes of the second plurality of bytes which are reallocated in each frame for LAN data transactions.

34.(Amended) The apparatus of claim [29] 33 wherein the LAN interface comprises:

a LAN hub connected to receive LAN data;

a central processing unit (CPU) connected to the LAN hub and operable to process and encapsulate the LAN data received into wide-area network (WAN) frames; and

an overhead interface connected to the CPU and operable to forward the WAN frames to the optical transmitter for transmission in the one or more reallocated bytes.

35.(Amended) The apparatus of claim [30] 34 wherein the LAN interface is connected to a LAN device to receive the LAN data.